

**Note: The first ~60 pages of this 121-page document contain deleted text.**

**~~CHAPTER 17.5. LEAD AND COPPER~~**

**~~ARTICLE 1. GENERAL REQUIREMENTS and DEFINITIONS~~**

**~~Section 64670. General Requirements.~~**

~~(a) — The requirements of this chapter constitute the primary drinking water standards for lead and copper. Unless otherwise indicated, each of the provisions of this chapter applies to community water systems and non-transient, non-community water systems (hereinafter referred to as "water systems" or "systems").~~

~~(b) — Each water system shall install and operate optimal corrosion control treatment.~~

~~(c) — Failure to comply with the applicable requirements of Articles 1 through 9, including requirements established by the Department pursuant to these provisions, shall constitute a violation of the primary drinking water standards for lead and/or copper.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.80(a), (d) and (k).

**~~Section 64671.05. Action Level.~~**

~~"Action level," for the purpose of this chapter only, means the concentration of lead or copper in water which is used to determine the treatment requirements contained in this chapter that a water system is required to complete.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.10. Corrosion Inhibitor.~~**

~~"Corrosion inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.15. Detection Limit for Purposes of Reporting (DLR).~~**

~~Detection limit for purposes of reporting (DLR)" means the designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring required under this chapter shall be reported to the Department.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 136.2.

**~~Section 64671.20. Effective Corrosion Inhibitor Residual.~~**

~~"Effective corrosion inhibitor residual" means a concentration of corrosion inhibitor that is sufficient to form a passivating film on the interior walls of a pipe.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.25. First Draw Sample.~~**

~~"First draw sample" means a one liter sample of tap water, collected in accordance with Section 64683(b), that has been standing in plumbing pipes at least six hours and is collected without flushing the tap.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.30. Large Water System.~~**

~~"Large water system." for the purpose of this chapter only, means a water system that serves more than 50,000 persons.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.35. Lead Service Line.~~**

~~"Lead service line" means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.



**~~Section 64671.40. Medium-size Water System.~~**

~~"Medium-size water system." for the purpose of this chapter only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.50. Optimal Corrosion Control Treatment.~~**

~~"Optimal corrosion control treatment", means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps without causing the water system to violate any primary drinking water standards.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.60. Service Line Sample.~~**

~~"Service line sample" means a one-liter sample of water, collected in accordance with Section 64683(c), that has been standing for at least six hours in a service line.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.65. Single-family Structure.~~**

~~"Single-family structure" means a building constructed as a single-family residence that is currently used as either a residence or a place of business.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**~~Section 64671.70. Small Water System.~~**

~~"Small water system," for the purpose of this chapter only, means a water system that serves 3,300 persons or fewer.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.2.

**Section 64672. Analytical Methods and Detection Limits.**

~~(a) Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted using the methods as prescribed at 40 Code of Federal Regulations, Section 141.89. Field tests shall be performed by water treatment operator certified by the Department pursuant to Section 4080 of the Health and Safety Code or by personnel trained to perform these tests by the Department, a certified laboratory, or certified operator.~~

~~(b) The detection limits for purposes of reporting (DLRs) for lead and copper are as follows:~~

## DLRs for Lead and Copper

<b>Contaminant</b>	<del>DLR (mg/L)</del>
Lead .....	0.005
Copper .....	0.050

~~(c) For purposes of determining the need for corrosion control studies, pursuant to 64673(b)(3), which are based on the difference in concentration between the source water and the 90th percentile tap results, the following shall apply:~~

- ~~(1) Analytical results for lead greater than or equal to 0.001 mg/L and less than 0.005 mg/L shall be as measured or 0.0025 mg/L, whichever is greater.~~
- ~~(2) Analytical results for copper greater than or equal to 0.001 mg/L and less than 0.050 mg/L shall be as measured or 0.025 mg/L, whichever is greater.~~
- ~~(3) Analytical results below 0.001 mg/L for lead and copper shall be considered zero.~~

~~(d) Analytical results below the detection limits for purposes of reporting for lead and copper specified in subsection (b) shall be reported as zero.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.89.

**Section 64672.3. Determination of Compliance with Lead and Copper Action Levels.**

~~(a) — The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).~~

~~(b) — The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).~~

~~(c) — The 90th percentile lead and copper levels shall be computed as follows:~~

~~(1) — The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.~~

~~(2) — The number of samples taken during the monitoring period shall be multiplied by 0.9.~~

~~(3) — The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(2) is the 90th percentile contaminant level.~~

~~(4) — For water systems serving less than or equal to 100 people that collect 5 samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.80(c).

**~~Section 64672.6. Use of Information Developed Prior to December 1, 1995.~~**

~~(a) — A system may submit to the Department information developed after June 7, 1991 for compliance with 40 CFR Part 141, National Primary Drinking Water Regulations, Subpart I, Control of Lead and Copper, 141.80 through 141.91, to fulfill requirements of this chapter.~~

~~(b) — A large water system which relies on a corrosion control study completed before December 1, 1995 shall:~~

~~(1) — Install optimal corrosion control treatment by January 1, 1997;~~

~~(2) — Complete follow up sampling by January 1, 1998; and~~

~~(3) — After July 1, 1998, the system shall operate in compliance with the optimal water quality control parameters as designated by the Department and shall continue to conduct tap sampling as directed in Sections 64685 and 64688.~~

~~(c) — A medium size or small water system which relies on tap monitoring or a corrosion control study completed before December 1, 1995 shall:~~

~~(1) — Install optimal corrosion control treatment within 24 months after such treatment has been designated, but in no case later than January 1, 1998;~~

~~(2) — Complete follow up sampling within 12 months of treatment installation, but in no case later than January 1, 1999;~~

~~(3) — After July 1, 1999, the small or medium size water system shall operate in compliance with the optimal water quality control parameters designated by the Department and continue to conduct tap sampling as directed in Sections 64685 and 64688.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.81(d) and (e).



ARTICLE 2. CORROSION CONTROL TREATMENT REQUIREMENTS

**~~Section 64673. Treatment Requirements.~~**

~~(a) — Each water system shall install and operate optimal corrosion control treatment as described in Section 64676.~~

~~(b) — A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in Sections 64674 and 64675 if the system satisfies one of the following criteria:~~

~~(1) — A small or medium-size water system is deemed to have optimized corrosion control if the system does not exceed the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with Article 6.~~

~~(2) — The system demonstrates to the Department that it has conducted activities equivalent to the corrosion control steps applicable to the system under Sections 64674 or 64675. If the Department makes this determination, it shall provide the system with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with Section 64676(f). The system shall provide the Department with the following information in order to support a determination under this paragraph:~~

~~(A) — The results of all test samples collected for each of the water quality parameters in Section 64676(e)(3).~~

~~(B) — A report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in Section 64676(e)(1), the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment;~~

~~(C) — A report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumers' taps; and~~

~~(D) — The results of tap water samples collected in accordance with Article 6 at least once every six months for one year after corrosion control has been installed.~~

~~(3) — A water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with Article 6 and source water monitoring conducted in accordance with Article 8 that demonstrate for two consecutive six-month monitoring periods that the difference between the 90th percentile tap water lead level computed under Section 64672.3(c), and the highest source water~~

lead concentration, is less than the detection limit for purposes of reporting in Section 64672(b).

~~(e) — A small or medium-size water system that is required to complete the corrosion control treatment due to its exceedance of the lead or copper action level may cease completing the treatment steps specified in Section 64675 whenever the system does not exceed either action level during each of two consecutive monitoring periods conducted pursuant to Article 6 and submits the results to the Department. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system shall recommence completion of the applicable treatment steps specified in Section 64675, beginning with the first treatment step which was not previously completed in its entirety. The Department may require a system to repeat treatment steps previously completed by the system where the Department determines that this is necessary to implement properly the treatment requirements of this section. The Department shall notify the system in writing of such a determination and explain the basis for its decision.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.81(a through c).

**Section 64674. Corrosion Control Treatment Deadlines for Large Water Systems.**

~~(a) — Except as provided in Sections 64672.6, (b), and 64673(b)(2) and (3), large systems shall take the following corrosion control treatment steps by the indicated dates:~~

~~(1) — Conduct initial monitoring during two consecutive six-month monitoring periods by January 1, 1997 to meet the requirements in Sections 64684(b) and 64687.~~

~~(2) — Complete corrosion control studies by July 1, 1998 to meet the requirements Section 64676(e).~~

~~(3) — Begin installation of optimal corrosion control treatment by January 1, 1999 according to Section 64676(d).~~

~~(4) — Complete installation of optimal corrosion control treatment by January 1, 2001 to meet the requirements in Section 64676(e).~~

~~(5) — Complete follow-up sampling by January 1, 2002 to meet the requirements in Sections 64685(a) and 64688(a).~~

~~(6) — Operate in compliance with the optimal water quality control parameters designated by the Department by July 1, 2002 pursuant to Section 64676(f).~~

~~(7) — Operate in compliance with the optimal water quality control parameters specified by the Department and continue to conduct tap sampling pursuant to Sections 64676(g), 64685(b), and 64688(b).~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.81(d).

**~~Section 64675. Corrosion Control Treatment Deadlines for Small & Medium-size Water Systems.~~**

~~(a) Except as provided in Section 64672.6(c) and Section 64673(b), small and medium-size water systems shall take the following corrosion control treatment steps by the indicated time periods:~~

~~(1) By January 1, 1996, each system shall begin initial monitoring. The system shall conduct monitoring during each six-month period until either the system becomes eligible for reduced monitoring under Section 64685, or the system exceeds the lead or copper action level. Each system which exceeds the lead or copper action level shall provide to the Department a recommendation of optimal corrosion control treatment pursuant to Section 64676(a) within six months after it exceeds the action level.~~

~~(2) If the lead or copper action level is exceeded pursuant to Section 64672.3 initiate corrosion control studies pursuant to Section 64676(b) if required to do so by the Department. If the system is not required to perform such studies, the system shall begin installation of optimal corrosion control treatment designated by the Department within the following time frames:~~

~~(A) for medium-size systems, within 12 months after such system exceeds the lead or copper action level.~~

~~(B) for small systems, within 18 months after such system exceeds the lead or copper action level.~~

~~(3) If the Department requires the system to perform corrosion control studies under paragraph (2), complete the studies within 18 months after receiving notice that the Department requires that such studies be conducted.~~

~~(4) If the system has performed corrosion control studies under paragraph (2), begin installation of optimal corrosion control treatment designated by the Department within six months after completion of the corrosion control studies.~~

~~(5) Complete installation of optimal corrosion control treatment within 24 months after the Department has designated such treatment.~~

~~(6) Complete follow-up sampling within 36 months after receiving notice that the Department has designated optimal corrosion control treatment.~~

~~(7) Within 42 months after receiving notice that the Department has designated optimal corrosion control treatment, operate in compliance with optimal water quality control parameters designated pursuant to Section 64676(f).~~

(8) ~~Operate in compliance with the optimal water quality control parameters specified by the Department and continue to conduct tap sampling pursuant to Sections 64676(g), 64685(b) and 64688(b).~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.81(e).

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**~~Section 64676. Corrosion Control Treatment Requirements.~~**

~~(a) — Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium size water systems exceeding the lead or copper action level shall recommend to the Department installation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section which the system believes constitutes optimal corrosion control for that system. The Department may require the system to conduct additional water quality parameter monitoring in accordance with Section 64687 to assist the Department in reviewing the system's recommendation.~~

~~(b) — The Department may require a small or medium size system, that exceeds the lead or copper action level to perform corrosion control studies under subsection (c) of this section, to identify optimal corrosion control treatment for the system if the water quality, distribution system, water treatment, or other features of the system are unique.~~

~~(c) — Each public water system performing corrosion control studies shall:~~

~~(1) — Evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:~~

~~(A) — Alkalinity and pH adjustment;~~

~~(B) — Calcium hardness adjustment; and~~

~~(C) — The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration throughout the distribution system.~~

~~(2) — Evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.~~

~~(3) — Measure the following water quality parameters in any tests conducted under this subsection before and after evaluating the corrosion control treatments listed above:~~

~~(A) — Lead;~~

~~(B) — Copper;~~

~~(C) — pH;~~

~~(D) — Alkalinity;~~

(E)——Calcium;

(F)——Conductivity;

(G)——Orthophosphate (when an inhibitor containing a phosphate compound is used);

(H)——Silicate (when an inhibitor containing a silicate compound is used);

(I)——Water temperature.

(4)——Identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following:

(A)——Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or

(B)——Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(5)——Evaluate the effect of the chemicals used for corrosion control treatment on other water treatment processes.

(6)——Recommend to the Department in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system on the basis of an analysis of the data generated during each evaluation. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraphs (c)(1) through (5) of this section.

(d)——Based upon consideration of available information including, where applicable, studies performed under paragraph (c) of this section, and a system's recommended treatment alternative, the Department shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in paragraph (c)(1) of this section. When designating optimal treatment the Department shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water treatment processes. The Department shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the Department requests additional information to aid its review, the water system shall provide the information.

(e) — ~~Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the Department under paragraph (d) of this section.~~

(f) — ~~After the system installs optimal corrosion control treatment, the Department shall review the treatment and specify optimal water quality control parameters as follows:~~

(1) — ~~a minimum value or a range of values for pH measured at each entry point to the distribution system;~~

(2) — ~~a minimum pH value, measured in all tap samples. Such value shall be equal to or greater than 7.0, unless the Department determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;~~

(3) — ~~if a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Department determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;~~

(4) — ~~if alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;~~

(5) — ~~if calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples;~~

(6) — ~~values for additional water quality control parameters determined by the Department to reflect optimal corrosion control for the system.~~

(g) — ~~Each system shall maintain water quality parameter values at or above minimum values or within ranges designated by the Department under subsection (f) in each sample collected under Section 64688(b). If the water quality parameter value of any sample is below the minimum value or outside the range designated by the Department, then the system is out of compliance with this section. As specified in Section 64688(b), the system may take a confirmation sample for any water quality parameter value no later than 3 days after the first sample. If a confirmation sample is taken, the result shall be averaged with the first sampling result and the average shall be used for any compliance determinations under this subsection.~~

(h) — ~~Upon its own initiative or in response to a request by a water system or other interested party, the Department may modify its determination of the optimal corrosion control treatment under subsection (d) or optimal water quality control parameters under subsection (f). A request for modification by a system or other interested party shall be~~



~~in writing, explain the reason for the requested modification, and include supporting documentation. The Department may modify its determination where it concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the Department's decision, and provide an implementation schedule for completing the treatment modifications.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.82(a through h).

ARTICLE 3. SOURCE WATER TREATMENT REQUIREMENTS

**~~Section 64677. Source Water Treatment to Control Lead and Copper.~~**

~~(a) — A system exceeding the lead or copper action level shall complete lead and copper source water monitoring and make a treatment recommendation to the Department pursuant to Section 64678(a) within six months after exceeding the lead or copper action level.~~

~~(b) — The Department shall make a determination regarding source water treatment pursuant to Section 64678(b) within six months after submission of monitoring results under subsection (a). If no determination is made by the Department within six months, and the Department has not requested additional information pursuant to Section 64678(b) to aid in its review, the source water treatment recommendation made by the system under subsection (a) shall be deemed approved.~~

~~(c) — If the installation of source water treatment is required the system shall install treatment pursuant to Section 64678(c) within 24 months after completion of subsection (b).~~

~~(d) — The system shall complete follow up tap water monitoring pursuant to Section 64685(a) and source water monitoring pursuant to Section 64690(b) within 36 months after completion of subsection (b).~~

~~(e) — The system shall operate in compliance with the Department specified maximum permissible lead and copper source water levels pursuant to Section 64678(d) and continue source water monitoring pursuant to Section 64690(c).~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.83(a).

**~~Section 64678. Source Water Treatment Requirements.~~**

~~(a) — Each system which exceeds the lead or copper action level shall either recommend to the Department the installation and operation of one of the source water treatments listed in subsection (b) or demonstrate that source water treatment is not needed to minimize lead and copper levels at users' taps.~~

~~(b) — The Department shall evaluate the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the Department determines that treatment is needed, the water system shall install and operate one of the following source water treatments as directed by the Department: ion exchange, reverse osmosis, lime softening, or coagulation/filtration. The Department shall notify the system in writing of its determination and set forth the basis for its decision. The water system shall provide any additional information requested by the Department to aid in its review.~~

~~(c) — Each system shall properly install and operate the source water treatment designated by the Department under subsection (b).~~

~~(d) — The Department shall review the source water samples pursuant to Sections 64690(a) and (b) before and after the system installs source water treatment. Based upon its review, the Department shall designate the maximum permissible lead and copper concentrations for treated water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment when properly operated and maintained. The Department shall notify the system in writing and explain the basis for its decision.~~

~~(e) — Each water system shall maintain lead and copper levels below the maximum permissible concentrations designated by the Department at each sampling point monitored in accordance with Article 8.~~

~~(f) — The Department may modify its determination of the source water treatment under subsection (b), or maximum permissible lead and copper concentrations for treated water entering the distribution system under subsection (d). A request for modification by the system shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The Department may modify its determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in water entering the distribution system. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the Department's decision, and provide an implementation schedule for completing the treatment modification.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.83(b).

ARTICLE 4. LEAD SERVICE LINE REPLACEMENT REQUIREMENTS

**Section 64679. Lead Service Line Replacement.**

(a) — Systems that exceed the lead action level in tap samples taken pursuant to Section 64685(a), after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of this section. If a system is in violation of Article 2 or 3 for failure to install source water or corrosion control treatment, the system shall commence lead service line replacement under this section after the date by which the system was required to conduct monitoring under Section 64685(a) has passed.

(b) — A system which is required to conduct lead service line replacement shall replace annually at least 7 percent of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system based upon a materials evaluation, including the evaluation required under Section 64682. The first year of lead service line replacement shall begin on the date the action level was exceeded in tap sampling referenced in subsection (a).

(c) — A system is not required to replace an individual lead service line if the lead concentration in each and every service line sample from that line, taken pursuant to Section 64683(c), is less than or equal to 0.015 mg/L.

(d) — A water system shall replace the entire service line (up to the building inlet) unless it demonstrates, that it controls less than the entire service line. In such cases, the system shall replace the portion of the line which is under the system's control. The system shall notify the user served by the line that the system will replace the portion of the service line under its control and shall offer to replace the building owner's portion of the line with the cost being borne by the building owner. For buildings where only a portion of the lead service line is replaced, the water system shall inform the resident(s) that the system will collect a first flush tap water sample after partial replacement of the service line is completed if the resident(s) so desire. In cases where the resident(s) accept the offer, the system shall collect the sample and report the results to the resident(s) within 14 days following partial lead service line replacement.

(e) — For purposes of lead service line replacement, a water system controls the entire lead service line (up to the building inlet) unless the system demonstrates, under Section 64691(e)(4), that it does not have any of the following forms of control over the entire line:

(1) — Authority to set standards for construction, repair, or maintenance of the line,

(2) — Authority to replace, repair, or maintain the service line, or

(3) — Ownership of the service line.

~~(f) — A system shall replace lead service lines on a shorter schedule than that required by subsection (b), taking into account the number of lead service lines in the system, where the Department determines that a shorter replacement schedule is either necessary based on elevated blood lead levels in the population served, or determines that it is feasible to complete the lead service line replacement program in a shorter time without increasing the water rates to the customers. The Department shall make this determination in writing and notify the system of its finding within 6 months after the system is triggered into lead service line replacement based on monitoring referenced in subsection (a).~~

~~(g) — A system may cease replacing lead service lines whenever first draw samples collected pursuant to Section 64683(b) do not exceed the lead action level during each of two consecutive monitoring periods and the system submits the results to the Department. If the first draw samples collected in any such water system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines, pursuant to subsection (b).~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.84.

ARTICLE 5. PUBLIC EDUCATION AND SUPPLEMENTAL MONITORING  
REQUIREMENTS

**~~Section 64680. Notification Language for Lead.~~**

~~(a) A water system that exceeds the lead action level based on tap water samples collected in accordance with Article 6 shall deliver the public education materials contained in paragraphs (1) and (2) of this subsection in accordance with the requirements in subsection (b).~~

~~(1) A water system shall include the following text in all of the printed materials it distributes through its lead public education program. Any additional information presented by a system shall be consistent with the information below and be in plain language that can be understood by laypersons.~~

~~(A) INTRODUCTION. The California Department of Health Services (DHS), the U.S. Environmental Protection Agency, and [insert name of water supplier] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the state and federal action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under state and federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace each lead service line that we control if the line contributes lead concentrations of 15 ppb or more after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.~~

~~(B) HEALTH EFFECTS OF LEAD. Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination — like dirt and dust — that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.~~

~~(C) LEAD IN DRINKING WATER~~

~~1. Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The U.S.~~

Environmental Protection Agency estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

2. ~~Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%. In California, a similar law prohibiting the use of both lead solder and lead pipe was enacted in 1985.~~

3. ~~When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.~~

#### ~~(D) — STEPS YOU CAN TAKE IN THE HOME TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER~~

1. ~~Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call [insert phone number of water system].~~

2. ~~If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:~~

A. ~~Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold-water faucet until the water gets noticeably colder, usually about 15 to 30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days]~~

per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

B. Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

C. Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

D. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the California Department of Health Services and your local environmental health department about the violation.

E. Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the record of building permits which should be maintained in the files of the [insert name of department that issues building permits]. A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the line. If the line is only partially controlled by the [insert name of the city, county, or water system that controls the line], we are required to provide you with information on how to replace your portion of the service line, and offer to replace that portion of the line at your expense and take a follow-up tap water sample within 14 days of the replacement. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

F. Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if



~~your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.~~

~~3. The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:~~

~~A. Purchase or lease a home treatment device.~~

~~Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Since these treatments remove dissolved minerals, water treated by these devices will have a greater tendency to leach lead from brass faucets or fittings which the water contacts after treatment. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit. The California Department of Health Services certifies the effectiveness of home treatment devices. Only devices certified by the California Department of Health Services to remove lead should be used for this purpose.~~

~~B. Purchase bottled water for drinking and cooking.~~

~~4. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:~~

~~A. [insert the name of city or county department of public utilities] at [insert phone number] can provide you with information about your community's water supply, and a list of local laboratories that have been certified by the California Department of Health Services for testing water quality;~~

~~B. [insert the name of city or county department that issues building permits] at [insert phone number] can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and~~

~~C. California Department of Health Services, Childhood Lead Poisoning Prevention Branch at [insert the phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead and how you can have your child's blood tested.~~

~~5. The following is a list of some state-approved laboratories in your area that you can call to have your water tested for lead. [Insert names and phone numbers of at least two laboratories].~~

~~(2) A water system shall include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcasting:~~

~~(A) Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for [insert free or cost per sample]. You can contact the [insert the name of the city or water system] for information on testing and on simple ways to reduce your exposure to lead in drinking water.~~

~~(B) To have your water tested for lead, or to get more information about this public health concern, please call [insert the phone number of the city or water system].~~

~~(b) The water system shall conform with the following requirements concerning delivery of the public education program:~~

~~(1) In communities where a significant proportion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language(s).~~

~~(2) A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with Sections 64682 through 64685 shall, within 60 days:~~

~~(A) insert notices in each customer's water utility bill containing the information in paragraph (a)(1), along with the following alert on the water bill itself in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION."~~

~~(B) submit the information in paragraph (a)(1) to the editorial departments of the major daily and weekly newspapers circulated throughout the community.~~

~~(C) deliver pamphlets and/or brochures that contain the public education materials in subparagraphs (a)(1)(B) and (D) to facilities and organizations, including the following:~~

~~1. Public schools and/or local school boards;~~

- ~~2. City or county health department;~~
- ~~3. Women, Infants, and Children and/or Head Start Program(s) whenever available;~~
- ~~4. Public and private hospitals and/or clinics;~~
- ~~5. Pediatricians;~~
- ~~6. Family planning clinics; and~~
- ~~7. Local welfare agencies.~~

~~(D) Submit the public service announcement in paragraph (a)(2) to at least five of the radio and television stations with the largest audiences that broadcast to the community served by the water system.~~

~~(3) A community water system shall repeat the tasks contained in subparagraphs (b)(2)(A),(B) and (C) every 12 months, and the tasks contained in subparagraph (b)(2)(D) every 6 months for as long as the system exceeds the lead action level.~~

~~(4) Within 60 days after it exceeds the lead action level, a non-transient non-community water system shall deliver the public education materials contained in subparagraphs (a)(1)(A), (B), and (D) as follows:~~

~~(A) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and~~

~~(B) Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the system.~~

~~(5) A non-transient noncommunity water system shall repeat the tasks contained in paragraph (b)(4) at least once during each calendar year in which the system exceeds the lead action level.~~

~~(6) A water system may discontinue delivery of public education materials if the system does not exceed the lead action level during the most recent six-month monitoring period conducted pursuant to Sections 64682 through 64685. Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116450, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.85(a), (b) and (c).

**~~Section 64681. Supplemental Monitoring.~~**

~~A water system that exceeds the lead action level on the basis of tap samples collected in accordance with Sections 64682 through 64685 shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample. The system may fulfill this requirement by arranging for an independent laboratory to collect and analyze the sample.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.85(d).

ARTICLE 6. MONITORING REQUIREMENTS FOR LEAD AND COPPER  
IN TAP WATER

**~~Section 64682. Sample Site Location.~~**

~~(a) — By the applicable date for commencement of monitoring under Section 64684(b), each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this article, and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in Section 64684(a). All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites shall not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.~~

~~(b) — A water system shall use existing information on lead, copper, and galvanized steel construction materials present in their distribution systems when conducting a materials evaluation. When an evaluation of the distribution system construction materials information is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in this Section, the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):~~

~~(1) — All plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system;~~

~~(2) — All inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and~~

~~(3) — All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.~~

~~(c) — Each community water system shall identify a sampling pool of "tier 1 sampling sites" consisting of single family structures except that, when multiple family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool. The sampling sites shall:~~

~~(1) — Contain copper pipes with lead solder installed after 1982; or~~

~~(2) — Contain lead pipes; or~~

~~(3) — Be served by a lead service line.~~

(d) — ~~Each community water system with insufficient tier 1 sampling sites shall complete its sampling pool with "tier 2 sampling sites," consisting of buildings, including multiple family residences that:~~

- ~~(1) — Contain copper pipes with lead solder installed after 1982; or~~
- ~~(2) — Contain lead pipes; or~~
- ~~(3) — Are served by a lead service line.~~

(e) — ~~Each community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with "tier 3 sampling sites," consisting of single family structures that contain copper pipes with lead solder installed before 1983.~~

(f) — ~~Each non-transient non-community water system shall identify a pool of "tier 1 sampling sites" consisting of buildings that:~~

- ~~(1) — Contain copper pipes with lead solder installed after 1982; or~~
- ~~(2) — Contain lead pipes; or~~
- ~~(3) — Are served by a lead service line.~~

(g) — ~~Each non-transient non-community water system with insufficient tier 1 sampling sites that meet the targeting criteria in subsection (f) shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983.~~

(h) — ~~Each water system whose sampling pool does not consist exclusively of tier 1 sites shall demonstrate to the Department under Section 64691(a)(2) why a review of the information listed in subsection (b) was inadequate to locate a sufficient number of tier 1 sites. Each community water system which includes tier 3 sampling sites in its sampling pool shall demonstrate why it was unable to locate a sufficient number of tier 1 and tier 2 sampling sites.~~

(i) — ~~Each water system whose distribution system contains lead service lines shall draw 50 percent of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of those samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall demonstrate to the Department pursuant to Section 64691(a)(4) why the system was unable to locate a sufficient number of such sites. Such a water system shall collect first draw samples from all of the sites identified as being served by such lines.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385 Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code;

and 40 Code of Federal Regulations 141.86(a).

**Section 64683. Sample Collection Methods.**

~~(a) — All tap samples for lead and copper collected in accordance with this chapter, with the exception of lead service line samples collected under Section 64679(c), shall be first draw samples.~~

~~(b) — Each first draw tap sample for lead and copper shall be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours. First draw samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. First draw samples from a non-residential building shall be collected at an interior tap from which water is typically drawn for consumption. First draw samples may be collected by the system or the system may allow residents to collect first draw samples after instructing the residents of the sampling procedures specified in this section. If the sample is not acidified immediately after collection, then the sample must stand in the original container for at least 28 hours after acidification. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.~~

~~(c) — Each service line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours. Lead service line samples shall be collected in one of the following three ways:~~

~~(1) — At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line;~~

~~(2) — Tapping directly into the lead service line; or~~

~~(3) — If the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.~~

~~(d) — A water system shall collect each first draw tap sample from the same sampling site from which it collected a previous sample. If the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria, and is within proximity of the original site.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.86(b).



**Section 64684. Sampling Requirements for Standard and Reduced Monitoring.**

~~(a) — Each water system conducting standard monitoring shall collect at least one sample during each monitoring period specified in subsection (b) and Section 64685(a),(b),(c) and (d), based on the number of people served, from at least the number of sites specified in Table 64684 (Standard Monitoring). Each water system conducting reduced monitoring under Section 64685(c and d) shall collect at least one sample during each monitoring period specified in Section 64685(c and d), based on the number of people served, from at least the number of sites specified in Table 64684 (Reduced Monitoring).~~

**Table 64684**  
**Lead and Copper Tap Sampling Sites**

<i>System Size</i>	<i>Number of Sites</i>	<i>Number of sites</i>
<i>(Number People Served)</i>	<i>(Standard Monitoring)</i>	<i>(Reduced Monitoring)</i>
<del>&gt;100,000</del>	<del>100</del>	<del>50</del>
<del>—10,001 to 100,000</del>	<del>60</del>	<del>30</del>
<del>—3,301 to 10,000</del>	<del>40</del>	<del>20</del>
<del>—501 to 3,300</del>	<del>20</del>	<del>10</del>
<del>—101 to 500</del>	<del>10</del>	<del>5</del>
<del>—101&lt;</del>	<del>5</del>	<del>5</del>

~~(b) — The first six month monitoring period for small, medium and large size systems shall begin not later than January 1, 1996.~~

~~(1) — Each large system shall monitor during two consecutive six month periods.~~

~~(2) — Each small and medium size system shall monitor during each six month monitoring period until:~~

~~(A) — The system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under Sections 64673 through 64675, in which case the system shall continue monitoring in accordance with Section 64685(a), or~~

~~(B) — The system does not exceed the lead and copper action levels during two consecutive six month monitoring periods, in which case the system may reduce monitoring in accordance with Section 64685(c) and (d).~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.86(c) and 141.86(d)(1).

**~~Section 64685. Monitoring Requirements After Installation of Corrosion Control and Source Water Treatment.~~**

~~(a) — Each water system shall conduct tap sampling after installing optimal corrosion control treatment or source water treatment.~~

~~(1) — Each large system which installs optimal corrosion control treatment pursuant to Section 64674(a)(7) shall monitor during two consecutive six-month monitoring periods by July 1, 1999.~~

~~(2) — Each small or medium-size system which installs optimal corrosion control treatment pursuant to Section 64675(a)(6) shall monitor during two consecutive six-month monitoring periods by the date specified in Section 64675(a)(7).~~

~~(3) — Each system which installs source water treatment pursuant to Section 64677(c) shall monitor during two consecutive six-month monitoring periods by the date specified in Section 64677(d).~~

~~(b) — The system shall monitor tap sampling during each six-month monitoring period, commencing when the Department specifies the values for water quality control parameters for optimal corrosion control under Section 64676(f).~~

~~(c) — Generally applicable criteria for reduced monitoring are as follows:~~

~~(1) — Each water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Department under Section 64676(f) during each of two consecutive six-month monitoring periods may request that the Department allow the system to reduce the frequency of monitoring to once per year and to reduce the number of lead and copper samples in accordance with Table 64684.~~

~~(2) — A water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Department under Section 64676(f) during three consecutive years of monitoring may request that the Department allow the system to reduce the frequency of monitoring from annually to once every three years.~~

~~(3) — When the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available, including changes in water source, water treatment, or distribution system changes, the Department shall review, and where appropriate revise its determination on reduced monitoring frequency. The Department shall make its decision in writing setting forth the basis for its determination.~~

~~(4) — Each water system that reduces the number and frequency of sampling shall collect these samples from sites included in the pool of targeted sampling~~

~~sites identified in Section 64682. Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August, or September.~~

~~(d) — Additional options for reduced monitoring for small and medium-size water systems are:~~

~~(1) — Each system that does not exceed the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with Table 64684, and reduce the frequency of sampling to once per year.~~

~~(2) — Each system that does not exceed the lead and copper action levels during three consecutive years of monitoring periods may reduce the frequency of monitoring for lead and copper from annually to once every three years.~~

~~(3) — Each small or medium-size water system that exceeds the lead or copper action level shall resume sampling in accordance with subsection (b) and collect the number of samples specified for standard monitoring under Table 64684. The system shall also conduct water quality parameter monitoring in accordance with Section 64687 or 64688 during the monitoring period in which it exceeded the action level.~~

~~(4) — Each water system that reduces the number and frequency of sampling shall collect these samples from sites included in the pool of targeted sampling sites identified in Section 64682. Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August, or September.~~

~~(e) — Each water system subject to reduced monitoring frequency that fails to operate within the range of values for the water quality parameters specified by the Department under Section 64676(f) shall resume tap sampling in accordance with subsection (b) and collect the number of samples specified for standard monitoring in Table 64684.~~

~~(f) — The result of any monitoring conducted in addition to the minimum requirements of this Section shall be considered in making any determinations under this chapter, including calculating the 90th percentile lead or copper level.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.86(d)(2) through (4) and 141.86(e).

## ARTICLE 7. MONITORING REQUIREMENTS FOR WATER QUALITY PARAMETERS

### **Section 64686. Water Quality Parameters General Requirements.**

~~(a) — Each system that exceeds the lead or copper action level shall monitor water quality parameters.~~

~~(b) — Each water system monitoring for water quality parameters shall collect samples using the following methods:~~

~~(1) — Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling for water quality parameter monitoring under this article is not restricted to taps targeted for lead and copper sampling.~~

~~(2) — Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system shall sample at each entry point to the distribution system during periods of normal operating conditions.~~

~~(c) — Each system shall, based on the number of persons served, collect two tap samples for applicable water quality parameters during each monitoring period specified under Sections 64687 (a) and 64688(a), (b) and (c) from the number of sites specified in Table 64686.~~

**Table 64686**  
Water Quality Parameter Monitoring Sites

<i>System Size</i>	<i>Number of Sites</i>
<i>(Number of People Served)</i>	
>100,000	25
10,001 to 100,000	10
— 3,301 to 10,000	3
— 501 to 3,300	2
— 101 to 500	1
— 101<	1

~~(d) — Each systems shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in Section 64687(a).~~

~~(e) — Each system shall collect one sample for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in Section 64688.~~

**NOTE:** Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.87(a).

**~~Section 64687. Water Quality Parameters Initial Sampling.~~**

~~(a) — Each large water system shall measure the applicable water quality parameters, as specified in subsections (b) and (c), at taps and at each entry point to the distribution system during each six-month monitoring period specified in Section 64684(b).~~

~~(b) — Each small or medium-size system shall measure the applicable water quality parameters as specified in subsections (c) and (d) during each six-month monitoring period specified in Section 64684(b), only if the system exceeds the lead or copper action level.~~

~~(c) — At taps the applicable parameters are:~~

~~(1) — pH;~~

~~(2) — Alkalinity;~~

~~(3) — Orthophosphate, when an inhibitor containing a phosphate compound is used;~~

~~(4) — Silica, when an inhibitor containing a silicate compound is used;~~

~~(5) — Calcium;~~

~~(6) — Conductivity; and~~

~~(7) — Water temperature.~~

~~(d) — At each entry point to the distribution system the applicable parameters are those listed in subsection (c).~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.87(b).

**Section 64688. Monitoring Requirements for Water Quality Parameters.**

~~(a) — Each large system which installs optimal corrosion control treatment pursuant to Section 64674(a)(7) shall measure the water quality parameters at the locations and frequencies specified below during each six-month monitoring period specified in Section 64685(a)(1). Each small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in Section 64685(a)(2) in which the system exceeds the lead or copper action level.~~

~~(1) — At taps, two samples for:~~

~~(A) — pH;~~

~~(B) — Alkalinity;~~

~~(C) — Orthophosphate, when an inhibitor containing a phosphate compound is used;~~

~~(D) — Silica, when an inhibitor containing a silicate compound is used;~~

~~(E) — Calcium, when calcium carbonate stabilization is used as part of corrosion control.~~

~~(2) — At each entry point to the distribution system, one sample every two weeks (bi-weekly) for:~~

~~(A) — pH;~~

~~(B) — When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and~~

~~(C) — When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).~~

~~(b) — After the Department specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under Section 64676(f), each large system shall measure the applicable water quality parameters in accordance with subsection (a) during each monitoring period specified in subsection 64685(b). Each small or medium-size system shall conduct such monitoring during each monitoring period specified in subsection 64685(b) in which the system exceeds the lead or copper action level. The system may take a confirmation sample for any water quality parameter value no later than 3 days after the first sample. If a confirmation sample is taken, the~~



result shall be averaged with the first sampling result and the average shall be used for any compliance determinations under subsection 64676(g).

(e) ~~— A system seeking reduced monitoring for water quality parameters is subject to the following criteria and conditions:~~

(1) ~~— A water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six month monitoring periods under subsection (b) shall continue monitoring at the entry point(s) to the distribution system as specified in Section 64688(a)(2). Such system may based on the population served, collect two tap samples for applicable water quality parameters from the following reduced number of sites specified in Table 64688 during each six month monitoring period.~~

**Table 64688**  
Reduced Water Quality Parameter Sampling

<i>System Size</i>	<i>Number of Sites</i>
<i>(Number People Served)</i>	
≥100,000	10
— 10,001 to 100,000	7
— 3,301 to 10,000	3
— 501 to 3,300	2
— 101 to 500	1
— 101≤	1

(2) ~~— A water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Department under subsection 64676(f) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (c)(1) from every six months to annually. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified in subsection 64676(f) during three consecutive years of annual monitoring under this Section may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in paragraph (c) (1) from annually to every three years.~~

(3) ~~— Each water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.~~

(4) ~~— Each water system subject to reduced monitoring frequency that fails to operate within the range of values for the water quality parameters specified by the Department under Section 64676(f) shall resume tap water sampling in accordance with the number and frequency requirements in subsection (b).~~

~~(d) — The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and submitted to the Department for making any determinations (i.e., determining concentrations of water quality parameters) under Sections 64686 through 64688 or Section 64676.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.87(c), (d), (e) and (f).

ARTICLE 8. MONITORING REQUIREMENTS FOR LEAD AND COPPER IN  
SOURCE WATER

**~~Section 64689. Source Water Sample Location, Collection Methods, and Number of  
Samples.~~**

~~(a) A water system that exceeds the lead or copper action level on the basis of tap samples collected in accordance with Article 6 shall collect lead and copper source water samples in accordance with Sections 64690(a) and (b).~~

~~(b) If the results of sampling indicate an exceedance of the maximum permissible source water levels established under Section 64678(d), one additional sample may be collected at the same sampling point within 14 days of the initial sample, to confirm the result. If a confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the maximum permissible levels. Any analytical results below the detection limit for purposes of reporting shall be considered to be zero.~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.88(a).

**~~Section 64690. Source Water Monitoring Frequency Requirements.~~**

~~(a) — Each system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system within six months after the exceedance.~~

~~(b) — Each system which installs source water treatment pursuant to Section 64677(c) shall collect an additional source water sample from each entry point to the distribution system during two consecutive six month monitoring periods by the deadline specified in Section 64677(d).~~

~~(c) — After the Department specifies maximum permissible source water levels or determines that source water treatment is not needed, the following monitoring frequency applies:~~

~~(1) — In cases where the Department specifies maximum permissible source water levels under Section 64678(d) or determines that the system is not required to install source water treatment under Section 64678(b), the system shall monitor as follows:~~

~~(A) — If the system uses only groundwater, the system shall collect samples once during the three year compliance period (as that term is defined in Section 64400.30) in effect when the applicable Department determination under paragraph (c)(1) is made. Such systems shall collect samples once during each subsequent compliance period.~~

~~(B) — If the system uses surface water, or a combination of surface and groundwater, the system shall collect samples once during each year. The first annual monitoring period for such systems shall begin on the date on which the applicable Department determination is made under paragraph (c)(1) of this Section.~~

~~(2) — A system is not required to conduct source water sampling for lead and/or copper if the system does not exceed the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under paragraph (c)(1)(A) or (B).~~

~~(d) — A water system may reduce the frequency of source water monitoring in the following cases:~~

~~(1) — Each system using only groundwater which demonstrates that the treated drinking water entering the distribution system has been maintained below the maximum permissible lead and/or copper concentrations specified by the Department in Section 64678(d) during at least three consecutive compliance periods under paragraph (c)(1) of this section, may reduce the monitoring frequency for lead and/or copper to once during each nine year compliance cycle (as that term is defined in Section 64400.20).~~

~~(2) — Each water system using surface water, or a combination of surface and ground waters, which demonstrates that the treated drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations pursuant to Section 64678(d) for at least three consecutive years, may reduce the monitoring frequency in paragraph (c)(1) of this section to once during each nine year compliance cycle (as that term is defined in Section 64400.20).~~

~~(c) — Each water system that uses a new source of water shall not be eligible for reduced monitoring for lead and/or copper until concentrations in samples collected from the new source during three consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the Department in Section 64678(d).~~

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.88(b through e).

ARTICLE 9. REPORTING AND RECORDKEEPING  
REQUIREMENTS

**Section 64691. Reporting Requirements.**

(a) — Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring are as follows:

(1) — Each water system shall report the information specified below for all tap water samples within the first 10 days following the end of each applicable monitoring period specified in Articles 6, 7, and 8.

(A) — The results of all tap samples for lead and copper including the location of each site and the tier criteria from Section 64682 under which the site was selected for the system's sampling pool;

(B) — A certification that each first draw sample collected by the water system was one liter in volume and stood motionless in the service line, or in the interior plumbing of a sampling site, for at least six hours;

(C) — Where residents collected samples, a certification that each tap sample collected by the residents was taken after the water system informed them of proper sampling procedures specified in Section 64683(b);

(D) — The 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period calculated in accordance with Section 64672.3(e);

(E) — With the exception of initial tap sampling conducted pursuant to Section 64684(b), the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;

(F) — The results of all tap samples for pH and, where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under Sections 64687 and 64688;

(G) — The results of all samples collected at the point(s) to the distribution system entry for applicable water quality parameters under Sections 64687 and 64688.

(2) — By January 1, 1997 each community water system which does not complete its targeted sampling pool with tier 1 sampling sites meeting the criteria in Section 64682(c) shall justify to the Department in writing its selection of tier 2 and tier 3 sampling sites under Section 64682(d) and (e).

~~(3) — By January 1, 1997, each non-transient, non-community water system which does not complete its sampling pool with tier 1 sampling sites meeting the criteria in Section 64682(f) shall justify to the Department in writing its selection of sampling sites under Section 64682(g).~~

~~(4) — By January 1, 1997, each water system with lead service lines that is not able to locate the number of sites served by such lines required under Section 64682(i) shall justify to the Department in writing why it was unable to locate a sufficient number of such sites based upon the information listed in Section 64682(b).~~

~~(5) — Each water system that requests that the Department reduce the number and frequency of sampling shall provide the information required under Section 64685(e).~~

~~(b) — Reporting requirements for source water monitoring are as follows:~~

~~(1) — Each water system shall report the sampling results for all source water samples collected in accordance with Article 8 within the first 10 days following the month in which the sample result was received.~~

~~(2) — With the exception of the first round of source water sampling conducted pursuant to Section 64690(a), the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.~~

~~(c) — By the applicable dates under Sections 64674 and 64675, systems shall report the following information related to corrosion control treatment:~~

~~(1) — For systems demonstrating that they have already optimized corrosion control, information required in Section 64673(b)(2) or (3).~~

~~(2) — For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under Section 64676(a).~~

~~(3) — For systems required to evaluate the effectiveness of corrosion control treatments under Section 64676(c), the information required therein.~~

~~(4) — For systems required to install optimal corrosion control designated by the Department under Section 64676(d), a letter certifying that the system has completed installing that treatment.~~

~~(d) — By the applicable dates in Article 3, systems shall provide the following information to the Department related to source water treatment:~~

~~(1) — If required under Section 64678(a), the system's recommendation regarding source water treatment;~~

~~(2) — For systems required to install source water treatment under Section 64678(b), a letter certifying that the system has completed installing the treatment designated by the Department within 24 months after the Department designated the treatment.~~

~~(e) — Systems shall report the following information to the Department to demonstrate compliance with the requirements of Article 4 related to lead service line replacement:~~

~~(1) — Within 12 months after a system exceeds the lead action level in sampling referred to in Section 64679(a), the system shall demonstrate that it has conducted a materials evaluation, including the evaluation set forth in Section 64682, to identify the initial number of lead service lines in its distribution system, and shall provide the system's schedule for replacing annually at least 7 percent of the initial number of lead service lines in its distribution system.~~

~~(2) — Within 12 months after a system exceeds the lead action level in sampling referred to in Section 64679(a), and every 12 months thereafter, the system shall demonstrate that the system has either:~~

~~(A) — Replaced in the previous 12 months at least 7 percent of the initial lead service lines, or a greater number of lines if specified by the Department under Section 64679(f), in its distribution system, or~~

~~(B) — Conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line(s), taken pursuant to Section 64683(c), is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and/or which meet the criteria in Section 64679(c) shall equal at least 7 percent of the initial number of lead lines identified under subsection (a) of this section (or the percentage specified by the Department under Section 64679(f)).~~

~~(3) — The annual letter submitted to the Department under paragraph (e)(2) of this section shall contain the following information:~~

~~(A) — The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule;~~

~~(B) — The number and location of each lead service line replaced during the previous year of the system's replacement schedule;~~

~~(C) — If measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.~~

~~(4) — As soon as practicable, but in no case later than three months after a system exceeds the lead action level in sampling referred to in Section 64679(a), any system seeking to rebut the presumption that it has control over the entire lead~~



~~service line pursuant to Section 64679(d) shall submit a letter to the Department describing the legal authority (e.g., statutes, municipal ordinances, public service contracts or other applicable legal authority) which limits the system's control over the service lines and the extent of the system's control.~~

~~(f) — By December 31st of each year, each water system that is subject to the public education requirements in Article 5 shall submit a letter to the Department demonstrating that the system has delivered the public education materials that meet the content requirements in Section 64680(a) and (b) and the delivery requirements in subsection 64680(b). This information shall include a list of all the newspapers, radio stations, television stations, facilities and organizations to which the system delivered public education materials during the previous year. The water system shall submit the letter required by this paragraph annually for as long as it exceeds the lead action level.~~

~~(g) — Each system which collects sampling data related to optimized corrosion control in addition to the minimum required by this chapter shall report the additional sampling results to the Department within 10 days after the end of the applicable monitoring period under Articles 6, 7, and 8 during which the samples are collected.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.90.

**~~Section 64692. Recordkeeping Requirements.~~**

~~Any system subject to the requirements of this chapter shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Department determinations, and any other information required by this chapter. Each water system shall retain the records required by this section for no fewer than 12 years or two compliance cycles (as defined in Section 64400.20), whichever is longer.~~

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116300 through 116750, Health and Safety Code; and 40 Code of Federal Regulations 141.91.

## **CHAPTER 17.5. LEAD AND COPPER**

### **ARTICLE 1. GENERAL REQUIREMENTS AND DEFINITIONS**

#### **Section 64670. General Requirements.**

(a) Unless otherwise indicated, the provisions of this chapter apply to community water systems and nontransient-noncommunity water systems (hereinafter referred to as "water systems" or "systems").

(b) Failure to comply with the applicable requirements of this chapter, including requirements established by the Department pursuant to these provisions, but not including action level exceedances, shall constitute a violation of the primary drinking water regulations for lead and/or copper.

(c) Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted using the methods prescribed at 40 Code of Federal Regulations, Section 141.89. Field tests shall be performed by water treatment or distribution operators certified by the Department pursuant to Section 4080 of the Health and Safety Code or by personnel trained to perform these tests by the Department, a certified laboratory, or certified operator.

(d) A new water system shall initiate compliance with the applicable sections of this chapter within six months of distributing water to consumers. An existing system that has changed size pursuant to the definitions in sections 64672.30, 64671.40 and 64671.70, shall initiate compliance with the newly applicable sections of this chapter within six months of the new classification.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.05. Action Level.**

"Action level," for the purpose of this chapter only, means the concentration of lead or copper in water that is used to determine the requirements that a system shall complete, pursuant to this chapter.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.08. Action Level Exceedance.**

“Action level exceedance,” for the purpose of this chapter only, means that the level of lead or copper is greater than the respective action level, as determined pursuant to section 64678(d) through (g).

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.10. Corrosion Inhibitor.**

"Corrosion inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.15. Detection Limit for Purposes of Reporting (DLR).**

“Detection limit for purposes of reporting (DLR)” means the designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring required under this chapter shall be reported to the Department.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.20. Effective Corrosion Inhibitor Residual.**

"Effective corrosion inhibitor residual" means the concentration of corrosion inhibitor or the active inhibitor component that is sufficient to maintain a passivating film on the interior walls of a pipe.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



**Section 64671.30. Large Water System.**

"Large water system." for the purpose of this chapter only, means a water system that serves more than 50,000 persons.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.35. Lead Service Line.**

"Lead service line" means a service line made of lead that connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.40. Medium-size Water System.**

"Medium-size water system." for the purpose of this chapter only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.50. Optimal Corrosion Control Treatment (CCT).**

"Optimal corrosion control treatment (CCT)", means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps without causing the water system to violate any primary drinking water standards.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.55. Period.**

“Period”, for the purpose of this chapter only, means a six-month monitoring period.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.65. Single-family Structure.**

"Single-family structure" means a building constructed as a single-family residence that is currently used as either a residence or a place of business.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.70. Small Water System.**

"Small water system," for the purpose of this chapter only, means a water system that serves 3,300 persons or fewer.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.75. Tap Sampling.**

”Tap sampling” means sampling conducted pursuant to sections 64675 (General Requirements for Tap Sampling for Lead and Copper), 64675.5 (Tap Sampling Frequency), and 64677 (Sampling Collection Methods for Taps) at sites selected pursuant to section 64676 (Sampling Site Selection), as required by applicable sections of this chapter.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



**Section 64671.80. WQP.**

“WQP” means water quality parameter.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64671.85. WQP Monitoring.**

“WQP monitoring” means sampling conducted pursuant to sections 64680 (General WQP Monitoring Requirements), 64681 (Initial WQP Monitoring), and 64682 (WQP Monitoring Requirements after CCT Installation) as required by applicable sections of this chapter.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

## ARTICLE 2. REQUIREMENTS ACCORDING TO SYSTEM SIZE

### **Section 64673. Small and Medium-size Water System Requirements.**

(a) The requirements in this section are applicable to all small and medium-size water systems.

(b) Each system shall initiate standard tap sampling for lead and copper no later than January 1, 1996. Sampling frequency may be reduced pursuant to section 64675.5 (Tap Sampling Frequency).

(c) A system with an action level exceedance shall take the following steps:

(1) Monitor WQPs, pursuant to section 64681 (Initial WQP Monitoring).

(2) Proceed with subparagraphs (A) through (F) if a corrosion control study is required by the Department, based on a review of the system's water quality, distribution system, water treatment, or system features:

(A) Complete the study, pursuant to section 64683 (Corrosion Control Study Procedure), within eighteen months of being notified of the requirement;

(B) Begin installation of the CCT designated by the Department, pursuant to section 64684 (CCT Installation and Operation), within six months of the Department's designation;

(C) Complete CCT installation and begin operation within 24 months of the designation;

(D) Complete two periods of tap sampling pursuant to section 64675 (General Requirements for Tap Sampling for Lead and Copper) and two periods of WQP monitoring pursuant to section 64682 (WQP Monitoring After CCT Installation) within 36 months of the designation; and

(E) Monitor WQPs and operate in compliance with the WQP levels specified by the Department pursuant to section 64684 (CCT Installation and Operation), beginning no later than within 42 months of the treatment designation.

(F) When the system submits new monitoring or treatment data, or when other data relevant to WQP monitoring becomes available, including changes in water source, water treatment, or distribution system changes, the Department will conduct a review and may revise its WQP monitoring frequency determination.

(3) If the Department does not require a corrosion control study, the system shall submit to the Department, within six months of the action level exceedance, a written recommendation for CCT. The Department may require the system to conduct additional WQP monitoring to assist in the review of the CCT recommendation. Upon notification of the designated CCT by the Department, the system shall begin installation of CCT within the following timeframes, and comply with paragraphs(2)(B) through (F):

(A) For medium-size systems, within 12 months, and

(B) For small-size systems, within 18 months;

(4) Monitor source waters, pursuant to article 6 (Source Water Requirements for Action Level Exceedances);

(d) A system with an action level exceedance for lead shall:

(1) Complete a public education program, pursuant to article 7 (Public Education Program for Lead Action Level Exceedances); and

(2) Replace lead service lines, pursuant to article 8 (Lead Service Line Requirements for Action Level Exceedances).

(e) A system that is required to comply with subsections (c) or (d) may cease completing the steps whenever the system does not have an action level exceedance during each of two consecutive periods. If any such system thereafter has an exceedance during any period, the system shall:

(1) Resume completion of the applicable steps, beginning with the first step that was not previously completed. The Department may require a system to repeat steps previously completed if the Department determines that this is necessary to implement the requirements of this section, based on a review of the system's data and treatment status.

(2) Resume standard tap sampling pursuant to 64675 (General Requirements for Tap Sampling for Lead and Copper).

(3) Conduct WQP monitoring during the period in which it exceeded the action level, pursuant to section 64682,(WQP Monitoring After CCT Installation) or 64684 (CCT Installation and Operation), whichever is applicable.

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

### **Section 64674 Large Water System Requirements.**

(a) The requirements in this section are applicable to all large water systems.

(b) Each system shall conduct standard tap sampling pursuant to section 64675 (General Requirements for Tap Sampling for Lead and Copper), and monitor for WQPs pursuant to section 64681 (Initial WQP Monitoring). Tap sampling frequency may be reduced pursuant to section 64675.5 (Tap Sampling Frequency).

(c) Each system shall complete a corrosion control study by July 1, 1998, pursuant to section 64683 (Corrosion Control Study Procedure), unless it can meet one of the following criteria:

(1) The Department determines that the system has optimized corrosion control based on a review of the following:

(A) The results of all test samples collected for each of the WQPs in section 64683(a)(3) (Corrosion Control Study Procedure);

(B) A report explaining the test methods used by the water system to evaluate corrosion control treatment alternatives pursuant to section 64683 (Corrosion Control Study Procedure), the results of all tests conducted, and the basis for the system's selection of CCT;

(C) A report explaining how CCT has been installed and is being operated pursuant to section 64684 (CCT Installation and Operation); and

(D) The results of tap sampling for lead and copper for two consecutive periods after corrosion control has been installed.

(2) The system demonstrates for two consecutive periods that the difference between the 90th percentile tap sampling lead level and the highest source water monitoring result for each period is less than the reporting level for purposes of reporting (DLR), pursuant to subsections 64678 (a), (b) and (c) (Determination of Exceedances of Lead and Copper Action Levels), or that the source water lead levels are below the method detection level of 0.001 mg/L and the 90<sup>th</sup> percentile lead level is equal to or less than the DLR for each period. In either case, the system shall also not have a copper action level exceedance. If such a system ceases to meet this criteria, it shall conduct a corrosion control study, pursuant to section 64683 (Corrosion Control Study Procedure) within eighteen months of not meeting the criteria, and proceed thereafter pursuant to subsection (e).

(d) Each system that conducts a corrosion control study shall comply with the following timeframes:

(1) Begin CCT installation within 12 months of being notified of the Department's designation for CCT.

(2) Complete CCT installation and begin operation within 36 months of the Department's designation.

(3) Monitor WQPs and operate in compliance with the WQP levels designated by the Department pursuant to section 64684 (CCT Installation and Operation), beginning no later than within 42 months of the Department's designation.

(A) WQP tap monitoring may be reduced as follows if the system has no action level exceedance:

1. After two consecutive periods during which the system meets the Department-specified WQP values or ranges, the system shall monitor each period at the reduced number of sites, pursuant to table 64680-A;

2. After three consecutive years (including the initial sampling year) during which the system meets the Department-specified WQP values or ranges, the system shall monitor annually at the reduced number of sites at evenly-spaced intervals throughout the year; and

3. After three consecutive years of annual monitoring during which the system meets the Department-specified WQP values or ranges, the system shall monitor once every three years at the reduced number of sites at evenly-spaced intervals throughout the monitoring year.

4. If a system has 90<sup>th</sup> percentile levels that do not exceed 0.005 mg/L for lead and 0.65 mg/L for copper for two consecutive periods, it may reduce the monitoring to once every three years at the reduced number of sites.

(B) When the system submits new monitoring or treatment data, or when other data relevant to WQP monitoring becomes available, including changes in water source, water treatment, or distribution system changes, the Department will conduct a review and may revise its WQP monitoring frequency determination.

(4) Monitor for two consecutive periods within 48 months of the Department's designation:

A. Tap sampling for lead and copper; and

B. If source water treatment has been installed, source sampling for lead and copper pursuant to section 64685 (Source Water Monitoring and Treatment Designation).

(e) In addition to meeting other applicable requirements in this chapter, a system with an action level exceedance for lead shall comply with the following:

(1) Monitor source waters, pursuant to article 6 (Source Water Requirements);

(2) Complete a public education program, pursuant to article 7 (Public Education Program for Action Level Exceedances); and

(3) Replace lead service lines, pursuant to article 8 (Lead Service Line Requirements).

(f) In addition to meeting other applicable requirements in this chapter, a system with an action level exceedance for copper shall comply with subsection (e)(1).

NOTE: Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

### ARTICLE 3. MONITORING FOR LEAD AND COPPER

#### **Section 64675. General Requirements for Tap Sampling for Lead and Copper.**

(a) During each period, each system conducting standard tap sampling pursuant to the requirements in this chapter shall collect one sample from the number of sites based on the number of people served specified in table 64675-A under Standard Sampling.

(b) During each period, each system conducting reduced tap sampling pursuant to the requirements in this chapter shall collect at least one sample from the number of sites based on the number of people served specified in table 64675-A under Reduced Sampling, as follows:

(1) The sites shall be representative of the sites required for standard monitoring.

(2) The samples shall be collected during the months of June, July, August, or September, unless the Department approves a different sampling period based on a review of the system's operations and lead and copper data, in which case the system shall initiate sampling under the different sampling period when directed in writing to do so by the Department, as follows:

A. No later than 21 months after the previous period, if monitoring annually, or

B. No later than 45 months after the previous period, if monitoring triennially.

**Table 64675-A**  
**Lead and Copper Tap Sampling Sites**

<u>System Size</u> <u>(Number People Served)</u>	<u>Minimum Number of Sites</u> <u>(Standard Sampling)</u>	<u>Minimum Number of sites</u> <u>(Reduced Sampling)</u>
>100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
101<	5	5

(c) Sample sites shall be selected pursuant to section 64676 (Sample Site Selection).

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64675.5. Tap Sampling Frequency.**

(a) Initial standard tap sampling shall be conducted for two consecutive periods.

(b) Tap sampling frequency may be reduced as follows:

(1) If a system has 90<sup>th</sup> percentile levels that do not exceed 0.005 mg/L for lead and 0.65 mg/L for copper for two consecutive periods, it may reduce the monitoring to once every three years at the reduced number of sites.

(2) For other systems, after two consecutive periods with no action level exceedance, the frequency may be reduced to annually at the reduced number of sites, if the system receives written approval from the Department. After sampling for three years (including the initial sampling year) with no action level exceedance, the frequency may be reduced to once every three years at the reduced number of sites, if the system receives written approval from the Department.

(c) If a system demonstrates for two consecutive periods that the difference between the 90th percentile tap sampling lead level and the highest source water monitoring result for each period is less than the reporting level for purposes of reporting (DLR), pursuant to subsections 64678(a), (b), and (c) or that the source water lead levels are below the method detection level of 0.001 mg/L and the 90<sup>th</sup> percentile lead level is equal to or less than the DLR for each period, the system shall conduct tap sampling once between October 1, 1997, and September 30, 2000 and once every three years thereafter.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



**Section 64676. Sample Site Selection.**

(a) Each system shall complete a materials evaluation of its distribution system in order to identify a pool of sampling sites that meets the requirements of this section, and is large enough to ensure that the water system can collect the required number of lead and copper tap samples. All sites from which first draw samples are collected shall be selected from this pool. Sampling sites shall not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

(b) Each system shall use existing information on lead, copper, and galvanized steel construction materials present in its distribution system when conducting a materials evaluation. When an evaluation of the distribution system construction materials information is insufficient to locate the required number of lead and copper sampling sites that meet the criteria in this section, the system shall review the sources of information listed below. In addition, the system shall seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities):

(1) All plumbing codes, permits, and records in the files of the building department(s) that indicate the plumbing materials installed within publicly and privately owned structures connected to the distribution system;

(2) All inspections and records of the distribution system that indicate the material composition of the service connections connecting a structure to the distribution system; and

(3) All existing water quality information, which includes the results of prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

(c) Each community water system shall:

(1) Identify a sampling pool of "tier 1" sampling sites consisting of single-family structures except that, when multiple-family residences comprise at least 20 percent of the structures served by a water system, the system may include these types of structures in its sampling pool. The sampling sites shall

(A) Contain copper pipes with lead solder installed after 1982; or

(B) Contain lead pipes; or

(C) Be served by a lead service line.

(2) If there is an insufficient number of "tier 1" sites, complete its sampling pool with "tier 2" sampling sites, consisting of buildings, including multiple-family residences that:

(A) Contain copper pipes with lead solder installed after 1982; or

(B) Contain lead pipes; or

(C) Are served by a lead service line.

(3) If there is an insufficient number of "tier 1" and "tier 2" sampling sites, complete its sampling pool with "tier 3" sampling sites, consisting of single-family structures that contain copper pipes with lead solder installed before 1983. A system with an insufficient number of tier 1, 2 and 3 sites shall complete its sampling pool with representative sites (i.e., plumbing materials commonly found at other sites) throughout the distribution system.

(d) Each nontransient-noncommunity water system shall:

(1) Identify a pool of "tier 1" sampling sites consisting of buildings that:

(A) Contain copper pipes with lead solder installed after 1982; or

(B) Contain lead pipes; or

(C) Are served by a lead service line.

(2) If there is an insufficient number of "tier 1" sites that meet the criteria in paragraph (1), complete its sampling pool with sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete the sampling pool, the system shall use representative sites (i.e., plumbing materials commonly found at other sites) throughout the distribution system.

(e) Each system whose distribution system contains lead service lines shall draw 50 percent of the samples it collects during each period from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of those samples from sites served by a lead service line. A system that cannot identify a sufficient number of sites served by a lead service line shall collect first draw samples from all of the sites identified as being served by such lines.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64677. Sample Collection Methods for Taps.**

(a) All tap samples for lead and copper collected pursuant to this chapter, with the exception of lead service line samples collected under Section 64689 (Lead Service Line Sampling) and samples collected under subsection (d), shall be first-draw samples, pursuant to subsection (b).

(b) A first-draw sample shall be one liter in volume and have stood motionless in the plumbing system of each site for at least six hours, but not more than twelve. Samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. Samples from a non-residential building shall be collected at an interior tap from which water is typically drawn for consumption. Samples may be collected by the system or the system may allow residents to collect tap samples after instructing the residents of the sampling procedures specified in this section. After acidification to resolubilize the metals, the sample shall stand in the original container for the time specified in the EPA-approved method before it can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(c) A system shall collect each tap sample from the same site from which it collected a previous sample. If the system cannot gain entry to a site in order to collect a follow-up tap sample, it may collect the follow-up tap sample from another site in its sampling pool as long as the new site meets the same criteria, and is within proximity of the original site.

(d) A system that does not have enough taps to supply first-draw samples may apply to the Department in writing to substitute non-first-draw samples. Such systems shall collect as many first-draw samples as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64677.5. Sample Invalidation.**

(a) A lead or copper sample may be invalidated by the Department if at least one of the following conditions is met and documented in writing:

(1) The laboratory establishes that improper sample analysis caused erroneous results;

(2) The Department determines that the sample was taken from a site that did not meet the site selection criteria in section 64676 (Sample Site Selection);

(3) The sample container was damaged in transit;

(4) The Department determines the sample does not meet the requirements in section 64677 (Sample Collection Methods for Taps); or

(5) There is substantial reason to believe that the sample was subject to tampering.

(b) To apply for invalidation of one or more samples, a system shall report the results of all samples for the period to the Department, including written documentation to support the system's belief that one or more samples should be invalidated.

(c) A sample invalidated pursuant to subsection (a) shall not count toward determining lead or copper 90th percentile levels or toward meeting any monitoring requirements in this chapter.

(d) The system shall collect replacement samples for any invalidated samples if, after the invalidation of one or more samples, the system has too few samples to meet the monitoring requirements of this chapter. Replacement samples taken after the end of the applicable period shall not be used to meet the monitoring requirements of a subsequent period. Replacement samples shall be collected as follows:

(1) As soon as possible, but no later than 20 days after the system receives notification from the Department that it has invalidated the sample, or by the end of the applicable period, whichever occurs later; and

(2) At the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64678. Determination of Exceedances of Lead and Copper Action Levels.**

(a) The detection limits for purposes of reporting (DLRs) for lead and copper are as follows:

**Table 64678-A. DLRs for Lead and Copper**

<u>Contaminant</u>	<u>DLR (mg/L)</u>
<u>Lead . . . . .</u>	<u>0.005</u>
<u>Copper . . . . .</u>	<u>0.050</u>

(b) For purposes of determining the difference in concentration between the source water and the 90th percentile tap results, the following shall apply:

(1) Analytical results for lead greater than or equal to 0.001 mg/L and less than 0.005 mg/L shall be as measured or 0.0025 mg/L, whichever is greater.

(2) Analytical results for copper greater than or equal to 0.001 mg/L and less than 0.050 mg/L shall be as measured or 0.025 mg/L, whichever is greater.

(3) Analytical results below 0.001 mg/L for lead and copper shall be considered zero.

(c) Analytical results below the DLRs for lead and copper specified shall be reported as zero.

(d) The lead action level is exceeded if the concentration of lead in more than 10 percent of the tap water samples collected during any period is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).

(e) The copper action level is exceeded if the concentration of copper in more than 10 percent of the tap water samples collected during any period is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).

(f) The 90th percentile lead and copper levels shall be computed as follows:

(1) The results of all lead or copper samples collected during a period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.

(2) The number of samples taken during the period shall be multiplied by 0.9.

(3) The contaminant concentration in the numbered sample identified by the calculation in paragraph (f)(2) is the 90th percentile contaminant level.

(4) For water systems serving less than or equal to 100 people that collect 5 samples per period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.

(g) The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and submitted to the department for making any determinations.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

### **Section 64678.5. Monitoring Waivers for Small Systems.**

(a) A small water system may apply to the Department for a waiver to reduce the tap sampling frequency for lead and copper to once every nine years, and shall continue tap sampling as required by this chapter until it receives written notification from the Department that the waiver has been approved.

(b) A system that meets the following materials and monitoring criteria for both lead and copper will be granted a full waiver, while a system that meets both sets of criteria for only one of the chemicals will be granted a partial waiver that covers only that chemical.

(1) To meet the materials criteria, a system shall provide certification and documentation that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, satisfy the following:

(A) For lead, the system shall be free of the following lead-containing materials:

1. Plastic pipes that contain lead plasticizers, or plastic service lines that contain lead plasticizers; and

2. Lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA section 1417(e)).

(B) For copper, the system shall be free of copper pipes and copper service lines.

(2) To meet the monitoring criteria, the system shall have completed at least one period of standard tap sampling and demonstrate that the 90<sup>th</sup> percentile levels for all periods of tap sampling conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, do not exceed the following:

A. For lead, 0.005 mg/L.

B. For copper, 0.65 mg/L.

(c) If granted a waiver, the system shall

(1) Comply with any requirements that the Department includes as conditions of the waiver, such as limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver;

(2) Conduct tap sampling at the reduced number of sites for one period every nine years for the chemical(s) for which the waiver has been granted;

(3) Provide the materials certification specified in paragraph (b)(1) for the chemical(s) for which the waiver has been granted, along with the monitoring results; and

(4) If the waiver was granted for only one chemical, continue to monitor pursuant to this chapter for the other chemical.

(d) If the system continues to satisfy the requirements of subsections (b) and (c), the waiver will be renewed automatically, unless the Department notifies the system that the waiver has been revoked and why. A system whose waiver has been revoked may re-

apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria in subsection (b) and (c).

(e) If a system with a waiver adds a new source of water or changes any water treatment, the Department may require the system to add or modify waiver conditions (e.g., require recertification that the system is free of lead-containing and/or copper-containing materials, require additional tap sampling periods), if it deems such modifications are necessary to address treatment or source water changes at the system.

(f) If a system with a waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, the system shall notify the Department in writing no later than 60 days after becoming aware of such a change.

(g) If a system with a waiver that has been collecting samples during the months of June through September receives state approval to alter its sample collection period pursuant to section 64675(b)(2) (General Requirements for Tap Sampling for Lead and Copper), it shall conduct its next tap sampling before the waiver expires.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



**Section 64679. Supplemental Monitoring.**

A water system with a lead action level exceedance shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample. The system may fulfill this requirement by arranging for an independent laboratory to collect and analyze the sample.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

## ARTICLE 4. WATER QUALITY PARAMETER (WQP) MONITORING

### **Section 64680. General WQP Monitoring Requirements.**

(a) WQP monitoring shall be conducted as required pursuant to section 64673 (Small and Medium-size Water System Requirements) and section 64774 (Large Water System Requirements).

(b) WQP tap monitoring shall be conducted as follows:

(1) Representative of water quality throughout the distribution system, by considering the number of persons served, the different sources of water and treatment methods employed, and seasonal variability.

(2) Not restricted to taps targeted for lead and copper sampling.

(3) Two samples for each applicable WQP during each period, from the standard number of sites, based on the number of persons served, specified in table 64680-A.

(c) WQP monitoring at the entry point(s) to the distribution system shall be one sample for each applicable WQP at each entry point from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system shall sample at each entry point during periods of normal operating conditions.

**Table 64680-A**  
**WQP Tap Sampling Sites**

<u>System Size</u>	<u>Minimum Number of Sites</u>	<u>Minimum Number of sites</u>
<u>(Number People Served)</u>	<u>(Standard Monitoring)</u>	<u>(Reduced Monitoring)</u>
<u>&gt;100,000</u>	<u>25</u>	<u>10</u>
<u>10,001 to 100,000</u>	<u>10</u>	<u>7</u>
<u>3,301 to 10,000</u>	<u>3</u>	<u>3</u>
<u>501 to 3,300</u>	<u>2</u>	<u>2</u>
<u>101 to 500</u>	<u>1</u>	<u>1</u>
<u>101&lt;</u>	<u>1</u>	<u>1</u>

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64681. Initial WQP Monitoring.**

(a) Initial WQP monitoring shall be conducted as required by section 64673(c)(1) (Small and Medium-size Water System Requirements) and section 64674(b) (Large Water System Requirements).

(b) For initial WQP monitoring, each system shall monitor for the following WQPs, pursuant to section 64680 (General WQP Monitoring Requirements):

- (1) pH;
- (2) Alkalinity;
- (3) Orthophosphate, when an inhibitor containing a phosphate compound is used;
- (4) Silica, when an inhibitor containing a silicate compound is used;
- (5) Calcium;
- (6) Conductivity; and
- (7) Water temperature.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Sec. 64682. WQP Monitoring After CCT Installation.**

(a) Each system that installs CCT shall monitor the following WQPs, as required by section 64673(c)(2)(D) (Small and Medium-size Water System Requirements) and section 64674(d)(3) (Large Water System Requirements), pursuant to section 64680 (General WQP Monitoring Requirements), as applicable:

(1) At taps:

(A) pH;

(B) Alkalinity;

(C) Orthophosphate, when an inhibitor containing a phosphate compound is used;

(D) Silica, when an inhibitor containing a silicate compound is used;

(E) Calcium, when calcium carbonate stabilization is used as part of corrosion control.

(2) At each entry point to the distribution system every two weeks as a minimum:

(A) pH;

(B) When alkalinity is adjusted as part of CCT, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and

(C) When a corrosion inhibitor is used as part of CCT, a reading of the dosage rate of the inhibitor used, and the concentration of the active ingredient(s).

(b) A ground water system may use entry points that are representative of water quality and treatment conditions throughout the system for the monitoring required in paragraph (a)(2) as follows:

(1) If waters from untreated and treated groundwater sources mix, the system shall monitor entry points representative of each;

(2) Prior to monitoring, the system shall submit written documentation to the Department identifying the sites and demonstrating that they are representative.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

## ARTICLE 5. CORROSION CONTROL

### **Sec. 64683. Corrosion Control Study Procedure.**

(a) Each system performing a corrosion control study shall:

(1) Evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the CCT for that system:

- A. Alkalinity and pH adjustment;
- B. Calcium hardness adjustment; and
- C. The addition of a corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration throughout the distribution system.

(2) Evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.

(3) Measure the following WQPs in any tests conducted under this subsection before and after evaluating the corrosion control treatments listed above:

- A. Lead;
- B. Copper;
- C. pH;
- D. Alkalinity;
- E. Calcium;
- F. Conductivity;
- G. Corrosion control inhibitor active ingredient (when an inhibitor is

used);

- H. Water temperature.

(4) Identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following:

- A. Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or
- B. Data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(5) Evaluate the effect of the chemicals used for corrosion control treatment on other water treatment processes.

(6) Recommend to the Department in writing the treatment option that the corrosion control studies indicate constitutes CCT for that system on the basis of an analysis of the data generated during each evaluation. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in paragraphs (c)(1) through (5) of this section.

(b) Based upon consideration of available information including, where applicable, studies performed under subsection (a), and a system's recommended treatment

alternative, the Department will either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in paragraph (a)(1) of this section, notify the system of its decision on CCT in writing and explain the basis for its determination. If the Department requests additional information to aid its review, the water system shall provide the information.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64684. CCT Installation and Operation.**

(a) Each system shall properly install and operate throughout its distribution system the CCT designated by the Department in subsection 64683(b) (Corrosion Control Studies) or paragraph 64673(c)(3) (Small and Medium-size Water System Requirements).

(b) After the system installs CCT, the Department will review the treatment and specify WQPs as follows:

(1) A minimum value or a range of values for pH measured at each entry point to the distribution system;

(2) A minimum pH value of 7.0 or greater, measured in all tap samples, unless the Department determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;

(3) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Department determines is necessary to maintain a passivating film on the interior walls of the pipes of the distribution system;

(4) If alkalinity is adjusted as part of CCT, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;

(5) If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples; and

(6) Values for additional WQPs determined by the Department to reflect CCT for the system.

(c) After the Department specifies WQP values and ranges, each system shall monitor pursuant to section 64680 (General WQP Monitoring Requirements) and maintain WQPs as specified by the Department.

(d) A system shall be out of compliance with the Department-specified WQP values and ranges for any period during which it has excursions for more than nine days.

(1) An excursion occurs when a “daily value” at one or more sample sites for one or more WQPs in a day is below the minimum value or outside the range of Department-specified WQPs.

(2) A “daily value” for a WQP at a site is determined as follows:

(A) If sampling is more than once a day by continuous monitoring, grab sampling or both, the daily value shall be the average of all the day’s results at the sampling site.

(B) If sampling is once a day, the daily value shall be the day’s result.

(C) If sampling is less than once a day, the daily value shall apply to the day that the water supplier receives the result from the laboratory or the 14<sup>th</sup> day after the sample is collected, whichever comes first.

(3) When an excursion occurs, within 24 hours of being notified of the results of the initial sample(s), the system shall investigate the cause and collect a followup sample at each affected site for each WQP that did not meet the Department-specified

values. The criteria in paragraphs (d)(1) and (2) shall be applied to the followup sample results to determine if another excursion has occurred.

(e) A system conducting reduced monitoring that fails to meet the Department-specified WQPs shall resume standard WQP tap water monitoring pursuant to section 64680 (General WQP Monitoring Requirements).

(f) The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and submitted to the Department for making any determinations (i.e., determining concentrations of WQPs).

(g) Upon its own initiative or in response to a request by a system or other interested party, the Department may modify its designation of CCT or its specified WQP values and ranges if it determines that modification is necessary to ensure that the system continues to maintain CCT. Any request shall be in writing, explain the reason for the requested modification, and include supporting documentation.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



ARTICLE 6. SOURCE WATER REQUIREMENTS FOR ACTION LEVEL EXCEEDANCES

**Section 64685. Source Water Monitoring and Treatment Designation.**

(a) Within six months of an action level exceedance, a system shall:

(1) Collect one lead and copper source water sample from each entry point to the distribution system that is representative of the source or combined sources and is collected after any treatment, if treatment is applied before distribution;

(2) Either recommend to the Department the installation and operation of a source water treatment (ion exchange, reverse osmosis, lime softening, or coagulation/filtration) or demonstrate that source water treatment is not needed to minimize lead and copper levels at users' taps; and

(3) Submit any additional information requested by the Department to aid in its determination of whether source water treatment is necessary to minimize lead and copper levels in water delivered to users' taps.

(b) The Department will make a determination regarding source water treatment within six months after submission of monitoring results under subsection (a). If no determination is made by the Department within six months, and the Department has not requested additional information to aid in its review, the source water treatment recommendation made by the system under paragraph (a)(2) shall be deemed approved.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64686. Source Water Treatment Installation and Operation.**

(a) If the Department determines that source water treatment is required, the system shall comply with the following within the specified timeframes that begin with the Department's approval or determination regarding source water treatment:

- (1) Install the treatment within 24 months;
- (2) Collect an additional source water sample from each entry point to the distribution system during two consecutive periods within 36 months;
- (3) Complete two consecutive periods of standard monitoring for lead and copper pursuant to section 64675 (General Requirements for Tap Sampling for Lead and Copper) within 36 months.

(b) After the system installs source water treatment, based on its review of the data collected pursuant to subsection (a) and the contaminant removal capability of the installed treatment when properly operated, the Department will specify maximum permissible lead and copper levels for water entering the distribution system. The water system shall comply with these maximum permissible levels.

(c) After the Department specifies maximum permissible levels or determines that source water treatment is not needed, the system shall conduct Standard monitoring related to source water pursuant to table 64686-A, according to source water type. If approved by the Department based on a review of source water data, the system may reduce monitoring pursuant to table 64686-A.

**Table 64686-A. Standard and Reduced Monitoring Related to Source Water**

<u>Type of monitoring</u>	<u>Ground water</u>	<u>Surface water with or without groundwater</u>
	<u>1 monitoring round</u>	<u>1 monitoring round</u>
<u>Standard monitoring</u>	<u>1 sample at each entry point every 3 years, as a minimum</u>	<u>1 sample at each entry point every year, as a minimum</u>
<u>Reduced monitoring, after 3 consecutive rounds of standard monitoring in compliance with maximum permissible levels.</u>	<u>1 sample at each entry point every 9 years</u>	<u>1 sample at each entry point every 9 years</u>

(d) If a system does not have an action level exceedance for lead and/or copper during three consecutive years for groundwater or one year for surface water with or without groundwater, it is not required to conduct sampling related to source water for the specific contaminant.

(e) If the results of sampling indicate an exceedance of the maximum permissible levels, one additional sample may be collected at the same sampling point within 14 days of the initial sample to confirm the result. If a confirmation sample is collected, then the average of the initial and confirmation sample results shall be used to determine compliance with the maximum permissible levels.

(f) A water system that begins using a new water source shall reinitiate standard monitoring pursuant to subsection (c) and conduct three rounds of monitoring with the new source online before reducing the monitoring frequency.

(g) Upon its own initiative or in response to a request by a system or other interested party, the Department may modify its determination of the source water treatment, or maximum permissible lead and copper concentrations for finished water entering the distribution system. Any request shall be in writing, explain the reason for the requested modification, and include supporting documentation.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

ARTICLE 7. — PUBLIC EDUCATION PROGRAM FOR LEAD ACTION  
LEVEL EXCEEDANCES

**Section 64687. Public Education Program Content and Delivery.**

(a) A system with a lead action level exceedance shall deliver the following public education materials pursuant to subsection (c).

(1) A community water system shall include the following text in all of the printed materials it distributes through its lead public education program. Any additional information presented shall be consistent with the information below and be in plain language that can be understood by laypersons. A system may delete information pertaining to lead service lines, on approval by the Department, if the water system does not have any such lines. Building permit record availability and consumer access to these records may be modified, if approved by the Department.

(A) INTRODUCTION. The California Department of Health Services (DHS), the U.S. Environmental Protection Agency, and [insert name of water supplier] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the state and federal action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under state and federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of 15 ppb or more after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

(B) HEALTH EFFECTS OF LEAD. Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination -- like dirt and dust -- that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

(C) LEAD IN DRINKING WATER

1. Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The U.S. Environmental Protection Agency estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

2. Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking

water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%. In California, a similar law prohibiting the use of both lead solder and lead pipe was enacted in 1985.

3. When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

(D) STEPS YOU CAN TAKE IN THE HOME TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

1. Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call [insert phone number of water system].

2. If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

A. Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15 to 30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days] per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

B. Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

C. Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been

replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

D. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify the California Department of Health Services and your local environmental health department about the violation.

E. Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the record of building permits which should be maintained in the files of the [insert name of department that issues building permits]. A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line we own. If the line is only partially owned by the [insert name of the city, county, or water system that owns the line], we are required to provide the owner of the privately-owned portion of the service line with information on how to replace the privately-owned portion of the service line, and offer to replace that portion of the line at the owner's expense. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps you can take to minimize exposure to any temporary increase in lead levels that may result from the partial replacement, to take a follow-up sample at our expense from the line within 72 hours after the partial replacement, and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

F. Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

3. The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

A. Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and

replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Since these treatments remove dissolved minerals, water treated by these devices will have a greater tendency to leach lead from brass faucets or fittings which the water contacts after treatment. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit. The California Department of Health Services certifies the effectiveness of home treatment devices. Only devices certified by the California Department of Health Services to remove lead should be used for this purpose.

B. Purchase bottled water for drinking and cooking.

4. You can consult a variety of sources for additional information.

Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

A. [insert the name of city or county department of public utilities] at [insert phone number] can provide you with information about your community's water supply, and a list of local laboratories that have been certified by the California Department of Health Services for testing water quality;

B. [insert the name of city or county department that issues building permits] at [insert phone number] can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

C. California Department of Health Services, Childhood Lead Poisoning Prevention Branch at [insert the phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead and how you can have your child's blood tested.

5. The following is a list of some state approved laboratories in your area that you can call to have your water tested for lead. [Insert names and phone numbers of at least two laboratories].

(2) A nontransient-noncommunity water system shall include either the text in paragraph (a)(1) or the following text, in all of the printed materials it distributes through its lead public education program. Systems may delete information pertaining to lead service lines if approved by the Department if no lead service lines exist anywhere in the water system service area. Any additional information presented shall be consistent with the information below and be in plain English that can be understood by lay people.

(A) Introduction. The United States Environmental Protection Agency (EPA) and [insert name of water supplier] are concerned about lead in your drinking water. Some drinking water samples taken from this facility have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about

how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

(B) Health effects of lead. Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination - like dirt and dust - that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

1. Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

2. Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome-plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

3. When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

(D) Steps you can take to reduce exposure to lead in drinking water include:

1. Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in plumbing the more lead it may contain. Flushing the tap means running the cold water faucet for about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of the plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one gallon of water.

2. Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and then heat it.



3. The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.

4. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

- [insert the name or title of facility official if appropriate] at [insert phone number] can provide you with information about your facility's water supply; and
- [insert the name or title of the State Department of Health Services] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead.

(b) The system shall include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcasting:

(1) Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for [insert free or cost per sample]. You can contact the [insert the name of the city or water system] for information on testing and on simple ways to reduce your exposure to lead in drinking water.

(2) To have your water tested for lead, or to get more information about this public health concern, please call [insert the phone number of the city or water system].

(c) The system shall deliver the public education program as follows:

(1) In communities where a significant proportion of the population speaks a language other than English, public education materials shall be communicated in the appropriate language(s).

(2) Within 60 days of an exceedance, a community water system that is not repeating public education tasks by doing so, shall:

(A) insert notices in each customer's water utility bill containing the information in paragraph (a)(1), along with the following alert on the water bill itself in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION." A community water system with a billing cycle that does not include a billing within 60 days of the exceedance, or that cannot insert information in the bill without making major changes to its billing system, may use a separate mailing as long as it is conducted within 60 days of the exceedance.

(B) submit the information in paragraph (a)(1) to the editorial departments of the major daily and weekly newspapers circulated throughout the community.

(C) deliver pamphlets and/or brochures that contain the public education materials in subparagraphs (a)(1)(B) and (D) to facilities and organizations, including the following:

1. Public schools and/or local school boards;
2. City or county health department;
3. Women, Infants, and Children and/or Head Start Program(s)

whenever available;

4. Public and private hospitals and/or clinics;
5. Pediatricians;
6. Family planning clinics; and
7. Local welfare agencies.

(D) Submit the public service announcement in paragraph (a)(2) to at least five of the radio and television stations with the largest audiences that broadcast to the community served by the system.

(3) A community system shall repeat the tasks in subparagraphs (b)(2)(A), (B) and (C) every 12 months, and the tasks in subparagraph (b)(2)(D) every 6 months for as long as the system has a lead action level exceedance.

(4) Within 60 days after it has a lead action level exceedance, unless it is repeating public education tasks already completed, a non-transient non-community system shall deliver the public education materials in paragraphs (a)(1) or (a)(2) as follows:

(A) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and

(B) Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the system. The Department may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

(5) A non-transient noncommunity system shall repeat the tasks in paragraph (b)(4) at least once during each calendar year in which the system has a lead action level exceedance.

(6) A system may discontinue delivery of public education materials if it does not have a lead action level exceedance during the most recent period. The system shall recommence public education pursuant to this section if it subsequently has a lead action level exceedance.

(7) A community water system may apply to the Department, in writing, to use the text in paragraph (a)(2) in lieu of the text in paragraph (a)(1) and to perform the tasks listed in paragraphs (c)(4) and (c)(5) of this section in lieu of the tasks in paragraphs (c)(2) and (c)(3) of this section if:

(A) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

(B) The system provides water as part of the cost of services provided and does not separately charge for water consumption.

(8) A community water system serving 3,300 or fewer people may omit the task contained in subparagraph (c)(2)(D). As long as it distributes notices containing the information contained in paragraph (a)(1) of this section to every household served by the system, such systems may further limit their public education programs as follows:

(A) Systems serving 500 or fewer people may forego the task contained in subparagraph (c)(2)(B). Such a system may limit the distribution of the public education

materials required under subparagraph (c)(2)(C) to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, unless notified by the Department in writing that it shall make a broader distribution.

(B) If approved by the State in writing, a system serving 501 to 3,300 people may omit the task in subparagraph (c)(2)(B) and/or limit the distribution of the public education materials required under subparagraph (c)(2)(C) to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

(9) A community water system serving 3,300 or fewer people that delivers public education in accordance with paragraph (c)(8)(A) of this section shall repeat the required public education tasks at least once during each calendar year in which the system exceeds the lead action level.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

## ARTICLE 8. LEAD SERVICE LINE REQUIREMENTS FOR ACTION LEVEL EXCEEDANCES

### **Section 64688. Lead Service Line Replacement.**

(a) A system shall replace lead service lines pursuant to this section if:

- (1) It has a lead action level exceedance in tap samples after installing corrosion control and/or source water treatment (whichever sampling occurs later) and/or
- (2) It is in violation for failure to install source water treatment or CCT.

(b) A system that is required to conduct lead service line replacement shall annually replace at least 7 percent of the initial number of lead service lines in its distribution system, pursuant to the following.

(1) At the time the replacement program begins, the system shall identify the initial number of lead service lines in its distribution system based on a materials evaluation, including the evaluation required under section 64676 (Sample Site Selection).

(2) The first year of lead service line replacement shall begin on the date the system first had a lead action level exceedance.

(3) The system is not required to replace an individual lead service line if the lead concentration in each and every service line sample from that line, taken pursuant to the section 64687 (Lead Service Line Sampling), is less than or equal to 0.015 mg/L.

(4) The system shall replace that portion of the lead service line that it owns and keep ownership documentation in its files and offer to replace the building owner's portion of the line with the cost being borne by the building owner. If the building owner does not accept the offer, the system shall:

(A) At least 45 days prior to commencing the partial replacement, notify the resident(s) of all buildings served by the line that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures they make take to minimize their exposure. If the replacement is in conjunction with emergency repairs, the Department may allow a shorter notice. The notice shall be mailed unless an alternate method is approved by the Department, based on the feasibility of insuring that all consumers receive the notice; and

(B) Inform the resident(s) that the system will collect a first flush tap water sample within 72 hours after the partial replacement of the service line has been completed if the resident(s) so desire. If the resident(s) accept the offer, the system shall collect the sample and report the results to the resident(s) within three business days of receiving the results and to the Department.

(5) The system shall replace lead service lines on a shorter schedule than that required by subsection (b), taking into account the number of lead service lines in the system, if the Department determines that a shorter replacement schedule is either necessary based on elevated blood lead levels in the population served, or determines that it is feasible to complete the lead service line replacement program in a shorter time without increasing the water rates to the customers.

(c) A system may cease replacing lead service lines when it has two consecutive periods without a lead action level exceedance. If the system has a lead action level

exceedance during any subsequent period, it shall recommence replacing lead service lines.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64689. Lead Service Line Sampling.**

(a) Each lead service-line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours.

(b) Lead service line samples shall be collected in one of the following three ways:

(1) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water to be flushed shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line;

(2) Tapping directly into the lead service line; or

(3) If the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature that would be indicative of water that has been standing in the lead service line.

NOTE: Authority cited: Sections 100275, 116350, 116365, 116375 and 116385, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

ARTICLE 9. REPORTING AND RECORDKEEPING  
REQUIREMENTS

**Section 64690.10. Reporting: Tap Sampling.**

(a) Each system shall report the following for all tap sampling within the first 10 days after the end of each period during which such sampling was conducted:

(1) The results of all tap samples for lead and copper including the location of each site and the associated tier criteria from section 64676 (Sample Site Selection); and

(2) The 90th percentile lead and copper concentrations calculated pursuant to section 64678 (Determination of Exceedances of Lead and Copper Action Levels).

(b) With the exception of the first period of tap sampling, each system shall identify any site that was not sampled during previous periods, and include an explanation of why sampling sites have changed within the first 10 days after the end of each period during which sampling was conducted.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.20. Reporting: WQP Monitoring.**

(a) Each system shall report the results for all WQP monitoring conducted pursuant to article 4 (WQP Monitoring) within the first 10 days after the end of each period during which such monitoring was conducted

(b) Each water system that submits a request to the Department to reduce WQP monitoring shall provide the information required under section 64682 (WQP Monitoring after CCT Installation).

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.



**Section 64690.30. Reporting: Sample Site Selection.**

A system that does not have enough taps that can provide first-draw samples shall submit written documentation to the State identifying standing times and locations for enough non-first-draw samples to make up its sampling pool by the start of the first applicable monitoring period that commences after April 11, 2001.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.40. Reporting: CCT.**

(a) Each system shall submit the following related to corrosion control treatment to the Department, as required:

(1) For a large system demonstrating that it has already optimized corrosion control, the information listed in paragraph 64674(c)(1) (Large Water System Requirements);

(2) For a small or medium-size system not required to conduct a corrosion control study, but required to optimize corrosion control, its recommendation regarding CCT pursuant to paragraph 64673 (c)(3) (Small and Medium-size Water System Requirements);

(3) For a system required to conduct a corrosion control study according to section 64683 (Corrosion Control Study Procedure), the information required therein.

(4) For a system required to install CCT designated by the Department pursuant to section 64684 (CCT Installation and Operation), a letter certifying that the system has completed the installation.

(b) A system that collects sampling data related to CCT in addition to the minimum required by this chapter shall report the additional sampling results to the Department within 10 days after the end of the applicable period during which the samples are collected.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.50. Reporting: Lead Public Education Program.**

Within 10 days after the period in which public education was required, a system shall submit a letter to the Department demonstrating that it has delivered the public education materials as required by article 7 (Public Education Program for Lead Action Level Exceedances) and include a list of all the newspapers, radio stations, television stations, facilities and organizations to which the system delivered the materials during the previous year.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.60. Reporting: Source Water Requirements.**

(a) Each water system shall report the results for all samples related to source water collected under article 6 within the first 10 days following the month in which the sample result was received.

(b) With the exception of the first round of sampling related to source water, the system shall identify any site that was not sampled during previous periods and include an explanation of why the sampling point has changed.

(c) If a system is required under section 64685 (Source Water Monitoring and Treatment Designation) to submit a recommendation for source water treatment, it shall do so within six months of the exceedance.

(d) A system required to install source water treatment under article 6 (Source Water Requirements for Action Level Exceedances), shall submit a letter certifying that the system has completed installation within 24 months after the Department has designated the treatment or it has been deemed approved.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.70. Reporting: Lead Service Line Requirements.**

(a) Within 12 months after it has a lead action level exceedance, a system subject to article 8 (lead service line requirements for action level exceedances) shall demonstrate that it has conducted a materials evaluation including that in section 64676 (Sample Site Selection) to identify the initial number of lead service lines in its distribution system, and shall provide the system's schedule for annually replacing at least 7 percent of the initial number of lead service lines in its distribution system.

(b) Within 12 months after the lead action level exceedance, and every 12 months thereafter, the system shall submit the number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule, along with the following information to the Department:

(1) The number and location of each lead service line replaced during the previous year of the system's replacement schedule to demonstrate that it has replaced at least 7 percent of the initial lead service lines within the previous 12 months, or a greater number of lines if required by the Department; or

(2) Lead service line sampling results that demonstrate that the lead level from an individual line(s) is less than or equal to 0.015 mg/L, pursuant to section 64689 (Lead Service Line Sampling). The system shall submit the results of the lead service line sampling including the lead levels, location of each lead service line sampled, the sampling method, and the date of sampling. It shall also include the number and location of each lead service line replaced during the previous year. In such cases, the total number of lines replaced and/or that meet the criteria shall equal at least 7 percent of the initial number of lead lines identified or the percentage required by the Department.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.75. Reporting: Additional Monitoring Data.**

Any system that collects sampling data in addition to that required by this chapter shall report the results to the Department within the first ten days following the end of the period during which the samples are collected.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.

**Section 64690.80. Recordkeeping Requirements.**

Any system subject to the requirements of this chapter shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Department determinations, and any other information required by this chapter. Each water system shall retain the records required by this section for no fewer than 12 years or two compliance cycles (as defined in Section 64400.20), whichever is longer.

NOTE: Authority cited: Sections 100275, 116350, 116365, and 116375, Health and Safety Code. Reference: Sections 116325 through 116750, Health and Safety Code.